

WATERMARK SIGNAL GENERATING APPARATUS, WATERMARK SIGNAL GENERATING METHOD, COMPUTER-EXECUTABLE PROGRAM FOR PERFORMING THE SAME METHOD AND COMPUTER-READABLE STORAGE MEDIUM IN WHICH THE SAME PROGRAM IS STORED, DIGITAL WATERMARK EMBEDDING APPARATUS, AS WELL AS DIGITAL TELEVISION APPARATUS INCLUDING THE SAME DIGITAL WATERMARK EMBEDDING APPARATUS

ABSTRACT

An apparatus 10 for generating watermark signals to be embedded as a digital watermark in real-time contents includes: input means 12 for inputting the real-time contents; an input buffer 14 for storing the real-time contents; generation means for generating watermark signals corresponding to predicted intensities of the real-time contents from divided real-time contents; and an output buffer 18 for storing the generated watermark signals to be outputted. The generation means is configured by including prediction means 16 for predicting intensities of the watermark signals; control means 20 for controlling embedding by use of a message to be embedded as the digital watermark in the divided real-time contents; and means 22 for generating the watermark signals to be outputted.

101523351

EV001687268US

January 28, 2005

(12)特許協力条約に基づいて公開された国際出願

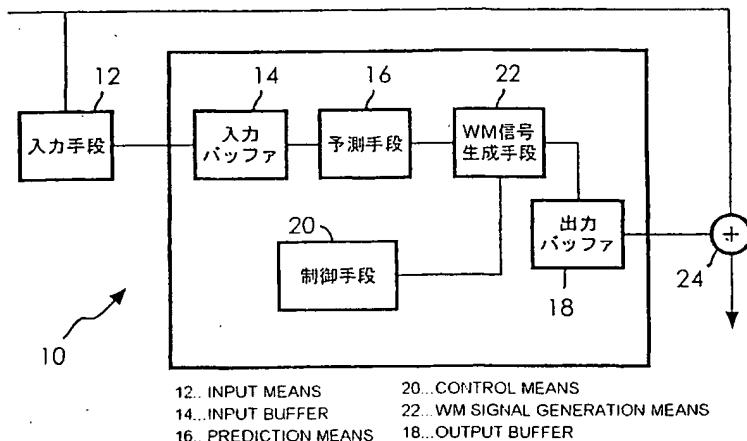
(19)世界知的所有権機関
国際事務局(43)国際公開日
2004年2月5日 (05.02.2004)PCT[†](10)国際公開番号
WO 2004/012453 A1

- (51) 国際特許分類: H04N 7/08, G10K 15/02
- (21) 国際出願番号: PCT/JP2003/009505
- (22) 国際出願日: 2003年7月25日 (25.07.2003)
- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ:
特願2002-220065 2002年7月29日 (29.07.2002) JP
- (71) 出願人(米国を除く全ての指定国について): インターナショナル・ビジネス・マシーンズ・コーポレーション (INTERNATIONAL BUSINESS MACHINES CORPORATION) [US/US]; 10504 ニューヨーク州アーモンク ニューオーチャードロード NY (US).
- (72) 発明者; および
(75) 発明者/出願人(米国についてのみ): 立花 隆輝 (TACHIBANA, Ryuki) [JP/JP]; 〒242-8502 神奈川県大和市下鶴間1623番地14 日本アイ・ビー・エム株式会社 東京基礎研究所内 Kanagawa (JP). 杉原亮 (SUGIHARA, Ryo) [JP/JP]; 〒242-8502 神奈川県大和市下鶴間1623番地14 日本アイ・ビー・エム株式会社 東京基礎研究所内 Kanagawa (JP).
- (74) 代理人: 坂口博, 外 (SAKAGUCHI, Hiroshi et al.); 〒242-8502 神奈川県大和市下鶴間1623番地14 日本アイ・ビー・エム株式会社 大和事業所内 Kanagawa (JP).
- (81) 指定国(国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,

/続葉有/

(54) Title: WM signal generation device, WM signal generation method, computer-executable program for executing WM signal generation method and computer readable recording medium ON WHICH the program IS RECORDED, digital watermarking device, and digital TV set including the digital watermarking device

(54) 発明の名称: WM信号生成装置、WM信号生成方法、WM信号生成方法を実行するためのコンピュータ実行可能なプログラムおよび該プログラムを記録したコンピュータ可読な記録媒体、電子透かし埋め込み装置、および該電子透かし埋め込み装置を含むディジタル・テレビ装置



(57) Abstract: A device, a program, and a storage medium for generating improved tolerance and quality WM signals and for digital watermarking and a digital TV set including the digital watermarking function. A device (10) for generating a WM signal to be digitally embedded as a watermark into a real-time content comprises receiving means (12) for receiving a real-time content; an input buffer (14) in which the real-time content is held; generation means for generating a WM signal, corresponding to the predicted intensity of the real-time content, from the divided real-time content; and an output buffer (18) for holding the generated WM signal. The generation means comprises prediction means (16) for predicting the intensity of the WM signal; control means (20) for controlling embedding using a message to be embedded as a watermark into the divided real-time content; and means (22) for generating an output WM signal.

/続葉有/

WO 2004/012453 A1